

Form PTO-1449 U.S. Department of Commerce Patent & Trademark Office		Atty. Docket No. 43062.0217	Serial No. <i>10/632,048</i>				
<b>INFORMATION DISCLOSURE STATEMENT</b> <i>(Use several sheets if necessary)</i>							
		Applicant Suranjan PANIGRAHI et al.					
		Filing Date July 31, 2003	Group Unknown 2876				
<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date (if appropriate)
<i>Den</i>	AA	5,751,421	05/12/98	Wright et al.	356	328	
	AB	5,991,025	11/23/99	Wright et al.	356	328	
	AC	5,898,792	04/27/99	Oste et al.	382	110	
	AD	4,540,282	09/10/85	Landa et al.	356	328	
	AE	3,597,616	08/03/71	Brunton et al.	250	83.3	
	AF	4,040,747	08/09/77	Webster	356	188	
	AG	4,253,766	03/03/81	Funk	356	418	
	AH	4,260,262	04/07/81	Webster	356	418	
<i>✓</i>	AI	4,463,261	07/31/84	Bowman	250	339	
<i>Den</i>	AJ	4,560,275	12/24/85	Goetz	356	326	
<b>OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
<i>Den</i>	AK	Randy Nouis, Predicting the Ninety-Fifth Percentile Dust Environment for Passenger Vehicles in the Continental United States, March 1-5, 1993, pp. 1-11					
	AL	C. S. Chang et al., Grain Flow Regulator for Dust Emission Control, November - December, 1985, pp. 2059-2062					
	AM	Joseph A. Borgia et al., Pressure Drop and Flow Characteristics for a Heavy-Duty Air Filter During Dust Loading, November 16-19, 1987, pp. 1-15					
<i>✓</i>	AN	Charles O. Reinhart et al., Measurement of Engine Air Cleaner Efficiency Using Airborne Particle Size Analysis, September 12-15, 1983, pp. 1-8					
<i>Den</i>	AO	Philip C. Williams, et al.; Determination of Protein and Moisture in Wheat and Barley by Near-Infrared Transmission, 1985, pp. 239-244					
EXAMINER <i>Diane den Liu</i>		DATE CONSIDERED <i>2/5/04</i>					
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<i>DR</i>	AA	4,806,764	02/21/89	Satake	250	339	
	AB	4,925,305	05/15/90	Erickson	356	300	
	AC	4,997,280	03/05/91	Norris	356	308	
	AD	5,132,538	07/21/92	Norris	250	339	
	AE	5,239,180	08/24/93	Clarke	250	339	
	AF	5,241,178	08/31/93	Shields	250	339	
	AG	5,308,981	05/03/94	Perten	250	339.01	
	AH	5,406,084	04/11/95	Tobler et al.	250	339.01	
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<i>DR</i>	AJ	5,327,708	07/12/94	Gerrish	56	1	
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	AL	Renfu Lu et al., Determination of Firmness and Sugar Content of Apples Using Near-Infrared Diffuse Reflectance, 24 pages					
	AM	F. De Lene Mirouze et al., Quantitative Analysis of Glucose Syrups by ATR/FT-IR Spectroscopy, 1993, pp 1187-1191					
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<i>DR</i>	AP	E. K. Kemsley et al., Quantitative analysis of sugar solutions using infrared spectroscopy, 1992, pp 299-304					
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<i>Re</i>	AA	4,037,970	07/26/77	Webster et al.	356	188	
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<i>Re</i>	AB	Dr. Daniel S. Humburg et al., Spectral Analysis of Sugar Beet Canopy for Spatial and Temporal Quantification of Sugar Content, Quality, and Disease, 12/14/99, pp. 1-6					
	AC	Dave Berard, Protein Monitor on the Market, 07/97, pp. 18-19					
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	AE	Jerry Workman, Jr., A Compact Reference for Practitioners, pp. Contents and 423-435					
	AF	Food Processing Automation, 05/06/90, pp. Table of Contents and 103-114					
	AG	Donald A. Burns, Handbook of Near-Infrared Analysis, pp. Contents 53-106					
	AH	P. C. Williams et al., Effect of Mutual Interactions on the Estimation of Protein and Moisture in Wheat, 11/24/82					
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	AI	Huaiyu Song et al., Neural Network Classification of Wheat Using Single Kernel Near-Infrared Transmittance Spectra, October 1995, pp. 2927-2934					
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	AK	Philip C. Williams, Application of Near Infrared Reflectance Spectroscopy to Analysis of Cereal Grains and Oilseeds, 1975, pp. 561-576					
	AL	Near-Infrared Reflectance Method for Protein Determination, pp. 1-2					
	AM	Near-Infrared Method for Protein Content in Whole-Grain Wheat, pp. 1-3					
	AN	Innovative Protein Monitoring, pp. 1-2					
<i>V</i>	AO	File History - U.S. Patent No. 5,751,421					
<i>Re</i>	AP	J. Sorvaniemi et al., Using Partial Least Squares Regression and Multiplicative Scatter Correction of FT-NIR Data Evaluation of Wheat Flours, 1993, pp 251-258					
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<i>Or</i>	AH	Suming Chen et al., "Neural Network Analysis of Sugar Content in Fruit Juice", 07/18-21/99, pp. Title page thru 12					
	AI	Renfu Lu et al., "Determination of Sugar Content and Firmness of Apples Using Near-Infrared Diffuse Reflectance", 07/9-12, 00, pp. Title page thru 16					
	AJ	K. J. Kaffka et al., "Attempts to Determine Oil, Protein, Water and Fiber Content in Sunflower Seeds by the NIR Technique", 1983, pp 117-129					
	AK	Essex E. Finney, Jr. et al., "Determination of Moisture in Corn Kernels by Near-Infrared Transmittance Measurements", 1978, pp 581-584					
	AL	Wang-Sheng Li et al., "Determination of Rough Rice Quality by a Portable Near-Infrared Spectroscopy", 1997, (5) pages					
	AM	D. T. Lamb et al., "Moisture Determination in Single Soybean Seeds by Near-Infrared Transmittance", 1991, pp 2123-2129					
	AN	P. C. Williams et al., "Influence of Temperature on Estimation of Protein and Moisture in Wheat by Near-Infrared Reflectance", 1982, pp 473-477					
<i>Or</i>	AO	D. Wang et al., "Effect of Wheat Kernel Size and Orientation on Reflectance Spectra and Single Kernel Color Classification", 1997, pp 1-34					
<i>Or</i>	AP	S. R. Delwiche, "Measurement of Single-Kernel Wheat Hardness Using Near-Infrared Transmittance", 1993, pp 1431-1437					
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Examiner Initial		Document Number	Date	Name	Class	Sub-Class	Filing Date (if appropriate)
<i>Re</i>	AA	5,578,931	11/26/96	Russell et al.	324	536	
	AB	5,218,529	06/08/93	Meyer et al.	702	028	
	AC	5,844,086	12/01/98	Murray	530	377	
	AD	6,005,076	12/21/99	Murray	530	377	
	AE	5,351,338	09/27/94	Wigren	704	219	
	AF	5,986,749	11/16/99	Wu et al.	356	073.1	
	AG	4,649,281	03/10/87	Schmitt et al.	250	574	
	AH	4,448,790	05/15/84	Sarkki et al.	426	052	
<i>Re</i>	AI	5,410,021	04/25/95	Kampen	530	372	
<i>Re</i>	AJ	5,472,511	12/05/95	Rayas et al.	127	067	
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	AL	Sterner et al., "Infrared Reflectance Spectroscopy for Estimation of Moisture of Whole Grain", 1977, pp345-351					
	AM	F. E. Dowell et al., "Automated Single Wheat Kernel Quality Measurement Using Near-Infrared Reflectance", 1997, pp 1,3,5,7, and 9					
	AN	B. G. Osborne, "Recent Progress in the Application of NIR to the Measurement of Quality Parameters in Flour", 1982, pp577-581					
<i>Re</i>	AO	J. S. Shenk, "How NIR Can Help in Measuring Forage Quality for Breeding and Utilization Programs", (3) pages					
<i>Re</i>	AP	Gerard Downey, "Estimation of Moisture in Undried Wheat and Barley by Near Reflectance", 1985, pp951-958					
EXAMINER <i>Marie R. Lis</i>			DATE CONSIDERED <i>2/5/04</i>				
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<i>Pde</i>	AA	4,836,017	06/06/89	Bozek	073	152.42	
	AB	5,755,672	05/26/98	Arai et al.	600	547	
	AC	3,886,331	05/27/75	Schierer	356	308	
	AD	5,317,524	05/31/94	Das et al.	702	134	
	AE	5,442,438	08/15/95	Batchelder et al.	356	301	
	AF	5,689,333	11/18/97	Batchelder et al.	356	301	
	AG	3,876,881	04/08/75	Bohlen	250	361.C	
	AH	5,130,158	07/14/92	Otsubo et al.	426	622	
<i>Pde</i>	AJ	5,173,079	12/22/92	Gerrish	460	007	
	AJ						
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<i>Pde</i>	AK	Dominique Bertrand et al., "Application of Principal Component Analysis to the Prediction of Lucerne Forage Protein Content and <i>in vitro</i> Dry Matter Digestibility by NIR Spectroscopy", 1987, pp299-307					
	AL	Shuso Kawamura et al., "Determining Undried Rough Rice Constituent Content Using Near-Infrared Transmission Spectroscopy", 1997, pp cover, 1,3,5, and 7					
	AM	Holger M. Jaenisch et al., "Instrumentation to Measure the Near-IR Spectrum of Small Fruits", 1990, pp162-166					
	AN	Paul Geladi et al., "Partial Least-Squares Regression: A Tutoria", 1985, pp1-17					
	AO	Constantinos Goutis, "Second-Derivative Functional Regression with Applications to Near Infra-Red Spectroscopy", 1998, pp103-114					
<i>Pde</i>	AP	Milling Feed and Fertiliser, "FMBRA takes the Grind out of Measuring Moisture", pp 34-35					
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<i>DR</i>	AA	5,224,203	06/29/93	Skeirik	395	22	
	AB	5,212,765	05/18/93	Skeirik	395	11	
	AC	5,619,618	04/08/97	Bigus	395	23	
	AD	5,617,511	04/01/97	Bigus	375	26	
	AE	5,697,373	12/16/97	Richards-Kortum et al.	128	664	
	AF	5,559,034	09/24/96	Roberts et al.	435	320.1	
	AG	5,605,577	02/25/97	Rayas et al.	127	67	
	AH	4,108,847	08/22/78	Creinin et al.	260	112 G	
<i>DR</i>	AI	6,001,412	12/14/99	Huber et al.	426	656	
<i>DR</i>	AJ	3,578,866	05/18/71	Kohler et al.	356	74	
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	AL	D. T. Williams et al., "The Derivative Spectrometer", 1970, pp 1597-1605					
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	AO	Kurt C. Lawrence et al., "Sensing Wheat Moisture Content Independent of Density", 1997, pp Cover Page, 1,3,5,7,9,11,13 and 15					
<i>DR</i>	AP	Abraham Savitzky et al., "Smoothing and Differentiation of Data by Simplified Least Squares Procedures", 1964; pp1627-1639					
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	AB	3,776,642	12/04/73	Anson et al.	356	188	
	AC	5,478,748	12/26/95	Akins et al.	436	86	
	AD	4,866,644	09/12/89	Shenk et al.	364	571.02	
✓	AE	5,448,069	09/05/95	Tobler et al.	250	339.01	
PB	AF	3,861,788	01/21/75	Webster	350	315	

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	AJ	"Comments on the Savitzky-Golay Convolution Method for Least-Squares Fit Smoothing and Differentiation of Digital Data", 1978, pp1383-1386
	AK	Gerald S. Birth et al., "Interaction Between Light and Natural Materials: Laboratory Demonstrations", (4) Cover Pages, and pp1-36
	AL	Gerald S. Birth, "How Light Interacts with Foods", (6) pages
	AM	H. Martens et al., "Partial Least Squares Regression: A New Two-Stage NIR Calibration Method", 1982, pp607-647
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